

In the Claims:

1. An apparatus comprising:
  - a flexible substrate to which a plurality of light sources are fixed;
  - a flexible substrate housing in which the flexible substrate is located;
  - wherein the flexible substrate is comprised of a peripheral region and a center region;
  - and further comprising a flexing device for flexing the flexible substrate by applying pressure to the center region of the flexible substrate to cause the flexible substrate to deform;
  - and wherein in a first state when the flexible substrate is not deformed by the flexing device, each of the plurality of light sources emits light which is concentrated in a first direction;
  - and wherein in a second state when the flexible substrate has been deformed by the flexing device, at least one of the plurality of light sources emits light which is concentrated in a second direction which differs from the first direction; and
  - wherein the flexible substrate housing is comprised of a removable holder and a case;
  - wherein the flexing device is comprised of the removable holder and the case;
  - and wherein the removable holder can be connected onto the case; and
  - and wherein the connecting of the removable holder onto the case can cause the flexible substrate to deform.
2. The apparatus of claim 1 and wherein the removable holder can be connected to the case by variably tightening the removable holder to the case to thereby apply a variable amount of pressure to the flexible substrate and a corresponding variable amount of deformation of the flexible substrate.
3. The apparatus of claim 1 and wherein the removable holder is in the form of a cover and the case is in the form of a flashlight case.

4. The apparatus of claim 2 wherein the removable holder when tightened causes the center region of the flexible substrate to be forced upwards by a surface of a battery.

5. The apparatus of claim 4 wherein the removable holder when screwed tightly causes the center region of the flexible substrate to be forced upwards by a terminal of a battery.

6. An apparatus comprising:

a flexible substrate to which a plurality of light sources are fixed;

a flexible substrate housing in which the flexible substrate is located;

wherein the flexible substrate is comprised of a peripheral region and a center region;

and further comprising a flexing device for flexing the substrate by applying pressure to the center region of the flexible substrate to cause the flexible substrate to deform;

wherein in a first state when the flexible substrate is not deformed by the flexing device each of the plurality of light sources emits light which is concentrated in a first direction;

wherein in a second state when the flexible substrate has been deformed by the flexing device at least one of the plurality of light sources emits light which is concentrated in a second direction which differs from the first direction;

and wherein the flexible substrate is comprised of a center electrical terminal located at the center region of the flexible substrate and wherein the flexing device makes electrical contact with the center electrical terminal of the flexible substrate when the flexing device applies pressure to the center region of the flexible substrate.

7. The apparatus of claim 6 wherein

each light source on the flexible substrate has a first terminal and a second terminal,

and each first and second terminal is electrically connected to its own first and second conductive material on the flexible substrate, respectively;

wherein the first conductive materials for all the light sources are electrically connected to a center conductive material on the flexible substrate;

wherein the second conductive materials for all the light sources are electrically connected to a peripheral conductive material on the flexible substrate;

and wherein by applying a positive terminal of a signal source to the center conductive material and by applying a negative terminal of the signal source to the peripheral conductive material, the plurality of light sources can be turned on.

8. The apparatus of claim 6 wherein

each light source on the flexible substrate has a first terminal and a second terminal,

and each first and second terminal is electrically connected to its own first and second conductive material on the flexible substrate, respectively;

wherein the first conductive materials for all the light sources are electrically connected to a center conductive material on the flexible substrate;

wherein the second conductive materials for all the light sources are electrically connected to its own separate distinct peripheral conductive material on the flexible substrate;

and wherein by applying a positive terminal of a signal source to the center conductive material and by applying a negative terminal of the signal source to the appropriate peripheral conductive material, a particular light source can be turned on.

9. The apparatus of claim 6 wherein the plurality of light sources are light emitting diodes.

10. An apparatus comprising:

a flexible substrate to which a plurality of light sources are fixed;

a flexible substrate housing in which the flexible substrate is located;

wherein the flexible substrate is comprised of a peripheral region and a center region;

and further comprising a flexing device for flexing the substrate by applying pressure to the center region of the flexible substrate to cause the flexible substrate to deform;

wherein the flexible substrate housing applies pressure to the peripheral region of the flexible substrate in a substantially opposite direction to the pressure being applied to the center region and while pressure is being applied to the center region of the flexible substrate;

and wherein in a first state when the flexible substrate is not deformed by the flexing device each of the plurality of light sources emits light which is concentrated in a first direction;

and wherein in a second state when the flexible substrate has been bent by the flexing device at least one of the plurality of light sources emits light which is concentrated in a second direction which differs from the first direction; and

wherein the flexing device is comprised of a battery having a first terminal, wherein the first terminal of the battery applies pressure to the center region of the flexible substrate to cause the flexible substrate to deform.

11. An apparatus comprising:

a flexible substrate to which a plurality of light sources are fixed;

a flexible substrate housing in which the flexible substrate is located;

wherein the flexible substrate is comprised of a peripheral region and a center region;

and further comprising a flexing device for flexing the substrate by applying pressure to the center region of the flexible substrate to cause the flexible substrate to deform;

and wherein in a first state when the flexible substrate is not deformed by the flexing device, each of the plurality of light sources emits light which is concentrated in a first direction;

and wherein in a second state when the flexible substrate has been bent by the flexing device at least one of the plurality of light sources emits light which is concentrated in a second direction which differs from the first direction;

wherein each light source on the flexible substrate has a first terminal and a second terminal, each first and second terminal is electrically connected to its own first and second conductive material on the flexible substrate, respectively;

wherein the first conductive materials for all the light sources are electrically connected to a center conductive material on the flexible substrate;

wherein the second conductive materials for all the light sources are electrically connected to a peripheral conductive material on the flexible substrate;

and wherein by applying a positive terminal of a signal source to the center conductive material and by applying a negative terminal of the signal source to the peripheral conductive material, the plurality of light sources can be turned on.

12. An apparatus comprising:

a flexible substrate to which a plurality of light sources are fixed;

a flexible substrate housing in which the flexible substrate is located;

wherein the flexible substrate is comprised of a first region and a second region;

and further comprising a flexing device for flexing the substrate by applying pressure in a first direction to the second region of the flexible substrate and simultaneously applying pressure in a second direction to the first region of the flexible substrate, wherein the first direction is substantially opposite the second direction, to cause the flexible substrate to deform;

and wherein in a first state when the flexible substrate is not deformed by the flexing device each of the plurality of light sources emits light which is concentrated in a third direction;

and wherein in a second state when the flexible substrate has been deformed by the flexing device at least one of the plurality of light sources emits light which is concentrated in a fourth direction which differs from the third direction; and

wherein the flexible substrate housing is comprised of a removable holder and a case;

wherein the flexing device is comprised of the removable holder and the case;

and wherein the removable holder can be connected to the case; and

and wherein the connecting of the removable holder onto the case can cause the flexible substrate to deform.

13. (twice amended) A lighting apparatus comprising:

a substrate;

a plurality of light emitting diodes;

a lamp driver circuit;

a communications component;

a base housing;

a lamp housing in which the substrate is located;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of a projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value;

wherein the substrate has a first circuit and a second circuit;

wherein the lamp driver circuit is electrically connected to the first circuit and the second circuit;

wherein a first portion of the plurality of light emitting diodes are connected to the first circuit and the first circuit can vary the intensity of the light emitted by the first portion of the plurality of light emitting diodes;

wherein a second portion of the plurality of light emitting diodes are connected to the second circuit and the second circuit can vary the intensity of the light emitted by the second portion of the plurality of light emitting diodes;

wherein the first portion of the plurality of light emitting diodes emits light of a first color and the second portion of the plurality of light emitting diodes emits light of a second color different from the first color;

wherein the second color is generated by white light emitting diodes; and

wherein the communications component can receive a control command for varying either the intensity of the first portion of the plurality of light emitting diodes or the second portion of the plurality of light emitting diodes to change the color temperature of the light emitted from the plurality of light emitting diodes.

14. (amended) The lighting apparatus of claim 13 wherein the first color is generated by yellow light emitting diodes.

15. (amended) The lighting apparatus of claim 13 wherein the first color is generated by amber light emitting diodes

16. (amended) The lighting apparatus of claim 13 wherein the first color is generated by any of red, blue or green light emitting diodes.

17. (amended) The lighting apparatus of claim 14 wherein varying the light intensity emitted by the first portion or the second portion of the plurality of light emitting diodes changes the color temperature of the light projected on to a surface.

18. (amended) The lighting apparatus of claim 15 wherein varying the light intensity emitted by the first portion or the second portion of the plurality of light emitting diodes changes the color temperature of the light projected on to a surface.

19. (amended) The lighting apparatus of claim 16 wherein varying the light intensity emitted by the first portion or the second portion of the plurality of light emitting diodes changes the color temperature of the light projected on to a surface.

20. (amended) The lighting apparatus of claim 13 wherein an electrical component is located within the base housing.

21. (amended) The lighting apparatus of claim 20 wherein the electrical component is a processor.

22. (twice amended) The lighting apparatus of claim 20 further comprising wherein the first lamp housing can pan and tilt in relation to the base housing by a motor.

23. (twice amended) The lighting apparatus of claim 20 wherein a position of the lamp housing relative to the base housing is caused by remote control.

24. (amended) The lighting apparatus claim 20 further comprising a communications line and the communications line can provide a control signal.

25. (amended) The lighting apparatus of claim 13 further comprising ventilation holes; and wherein the ventilation holes are located in the substrate in proximity to any of the light emitting diodes of the first or second portions.



26. The lighting apparatus of claim 25 further comprising a fan; and wherein the fan forces air through the ventilation holes.

27. (amended) A lighting apparatus comprising:

a substrate;

a plurality of light emitting diodes;

a lamp driver circuit;

a communications component;

a first housing in which the substrate is located;

wherein the substrate has a first circuit and a second circuit;

wherein the lamp driver circuit is electrically connected to the first circuit and the second circuit;

wherein a first portion of the plurality of light emitting diodes are connected to the first circuit and the first circuit can vary the intensity of the light emitted by the first portion of the plurality of light emitting diodes;

wherein a second portion of the plurality of light emitting diodes are connected to the second circuit and the second circuit can vary the intensity of the light emitted by the second portion of the plurality of light emitting diodes;

wherein the first portion of the plurality of light emitting diodes emits light of a first color and the second portion of the plurality of light emitting diodes emits light of a second color different from the first color;

wherein the second color is generated by white light emitting diodes; and

wherein the communications component can receive a control command for varying either the intensity of the first portion of the plurality of light emitting diodes or the second portion

of the plurality of light emitting diodes to change the color temperature of the light emitted from the plurality of light emitting diodes; and

further comprising a variable filter.

28. The lighting apparatus of claim 27 wherein the variable filter is a liquid crystal emulsion filter.

29. (amended) The lighting apparatus of claim 28 wherein the variable filter is mounted to the first housing wherein each of the light emitting diodes of the first and second portions emit light in a direction passing through the filter.

30. (amended) The lighting apparatus of claim 29 wherein a control command can vary the optical state of the filter.

31. The lighting apparatus of claim 13 wherein the substrate is a flexible substrate.

32. (amended) The lighting apparatus of claim 31 wherein the substrate is a curved substrate.

33. (twice amended) A lighting apparatus for projecting light onto a surface comprising:

a substrate;

a base housing;

a lamp housing, in which the substrate is located;

a plurality of light emitting diodes comprised of a first portion and a second portion each of the first and the second portion emitting light having an intensity;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a

predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of a projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value;

a variable filter;

a lamp driver;

a communications component;

wherein the substrate has a first circuit and a second circuit;

wherein the lamp driver is electrically connected to the first circuit and the second circuit;

wherein the first portion of the plurality of light emitting diodes are connected to the first circuit and the first circuit can vary the intensity of the light emitted by the first portion of the plurality of light emitting diodes;

wherein the second portion of the plurality of light emitting diodes are connected to the second circuit and the second circuit can vary the intensity of the light emitted by the second portion of the plurality of light emitting diodes;

wherein the first portion of the plurality of light emitting diodes emits light of a first color and the second portion of the plurality of light emitting diodes emits light of a second color different from the first color;

wherein the light emitted from the first portion and the second portion of the plurality of light emitting diodes is emitted through the variable filter; and

wherein the communications component can receive a control command for varying control information to the variable filter.

34. The lighting apparatus of claim 33 wherein the variable filter is a liquid crystal filter.

35. (twice amended) A lighting apparatus for projecting light onto a surface comprising:

a substrate;

a communications component;

first, second, third, fourth, fifth and sixth light emitting diodes of a plurality of light emitting diodes each of which is fixed to the substrate;

a lamp housing wherein the substrate is located;

a base housing;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of a projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value;

wherein each of the first, second, third, fourth, fifth and sixth light emitting diodes emits light having an intensity;

wherein the substrate has first, second, third, fourth, fifth and sixth circuits;

wherein the first light emitting diode is connected to the first circuit and the first circuit can vary the intensity of light emitted by the first light emitting diode;

wherein the second light emitting diode is connected to the second circuit and the second circuit can vary the intensity of light emitted by the second light emitting diode;

wherein the third light emitting diode is connected to the third circuit and the third circuit can vary the intensity of light emitted by the third light emitting diode;

wherein the fourth light emitting diode is connected to the fourth circuit and the fourth circuit can vary the intensity of light emitted by the fourth light emitting diode;

wherein the fifth light emitting diode is connected to the fifth circuit and the fifth circuit can vary the intensity of light emitted by the fifth light emitting diode;

wherein the sixth light emitting diode is connected to the sixth circuit and the sixth circuit can vary the intensity of light emitted by the sixth light emitting diode;

wherein each of the intensities of light of the first, second, third, fourth, fifth and six light emitting diodes can be varied independently of each of the other intensities of light of the first, second, third, fourth, fifth, and sixth light emitting diodes;

wherein the first, second, third, fourth, fifth and sixth light emitting diodes emit light of first, second, third, fourth, fifth and sixth wavelengths, respectively;

and wherein the communications component can receive a control command for varying each of the intensities of light of the first, second, third, fourth, fifth and sixth light emitting diodes.

36. (amended) The lighting apparatus of claim 35 wherein

the first light emitting diode emits light of a first color;

the second light emitting diode emits light of a second color;

the third light emitting diode emits light of a third color; and

the fourth light emitting diode emits light of a fourth color;

the fifth light emitting diode emits light of a fifth color;

the sixth light emitting diode emits light of a sixth color;

and wherein the first, second, third, fourth, fifth and sixth colors are different.

37. (amended) The lighting apparatus of claim 35 wherein an electrical component is located within the base housing.

38. The lighting apparatus of claim 37 wherein the electrical component is a battery.

39. (twice amended) The lighting apparatus of claim 37 wherein the lamp housing can pan and tilt in relation to the base housing by a motor.

40. (amended) The lighting apparatus of claim 39 wherein the rotation of the lamp housing relative to the base housing is caused by remote control.

41. (amended) The lighting apparatus claim 40 wherein a communications line is connected to the base housing.

42. The lighting apparatus of claim 35 further comprising ventilation holes and the ventilation holes are located in the substrate in proximity to any of the first, second, third, fourth, fifth or sixth light emitting diodes.

43. The lighting apparatus of claim 42 further comprising a fan; wherein the fan forces air through the ventilation holes.

44. (amended) A lighting apparatus for projecting light onto a surface comprising:

a substrate;

a communications component;

first, second, third, fourth, fifth and sixth light emitting diodes each of which is fixed to the substrate;

a first housing wherein the substrate is located;

wherein each of the first, second, third, fourth, fifth and sixth light emitting diodes emits light having an intensity;

wherein the substrate has first, second, third, fourth, fifth and sixth circuits;

wherein the first light emitting diode is connected to the first circuit and the first circuit can vary the intensity of light emitted by the first light emitting diode;

wherein the second light emitting diode is connected to the second circuit and the second circuit can vary the intensity of light emitted by the second light emitting diode;

wherein the third light emitting diode is connected to the third circuit and the third circuit can vary the intensity of light emitted by the third light emitting diode;

wherein the fourth light emitting diode is connected to the fourth circuit and the fourth circuit can vary the intensity of light emitted by the fourth light emitting diode;

wherein the fifth light emitting diode is connected to the fifth circuit and the fifth circuit can vary the intensity of light emitted by the fifth light emitting diode;

wherein the sixth light emitting diode is connected to the sixth circuit and the sixth circuit can vary the intensity of light emitted by the sixth light emitting diode;

wherein each of the intensities of light of the first, second, third, fourth, fifth and six light emitting diodes can be varied independently of each of the other intensities of light of the first, second, third, fourth, fifth, and sixth light emitting diodes;

wherein the first, second, third, fourth, fifth and sixth light emitting diodes emit light of first, second, third, fourth, fifth and sixth wavelengths, respectively;

and wherein the communications component can receive a control command for varying each of the intensities of light of the first, second, third, fourth, fifth and sixth light emitting diodes;

and further comprising a variable filter.

45. The lighting apparatus of claim 44 wherein the variable filter is a liquid crystal emulsion filter.

46. The lighting apparatus of claim 44 wherein the first, second, third, fourth, fifth and sixth light emitting diodes emit light in a direction passing through the filter.

47. The lighting apparatus of claim 44 further including a communications line and wherein the variable filter can be varied by communications received over the communications line.

48. The lighting apparatus of claim 35 wherein the substrate is a flexible substrate.

49. The lighting apparatus of claim 35 wherein the substrate is a curved substrate

50. (twice amended) A lighting apparatus for projecting light onto a projection surface comprising:

a substrate;

first, second, third, fourth, fifth and sixth light emitting diodes of a plurality of light emitting diodes, each of which is fixed to the substrate;

a lamp housing in which the substrate is located;

a base housing;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of the projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more



control signals which specify the predetermined azimuth value and the predetermined elevation value;

a communications component;

wherein each of the first, second, third, fourth, fifth and sixth light emitting diodes emit light having an intensity;

wherein the substrate has first, second, third, fourth, fifth and sixth circuits;

wherein the first light emitting diode is connected to the first circuit and the first circuit can vary the intensity of light emitted by the first light emitting diode;

wherein the second light emitting diode is connected to the second circuit and the second circuit can vary the intensity of light emitted by the second light emitting diode;

wherein the third light emitting diode is connected to the third circuit and the third circuit can vary the intensity of light emitted by the third light emitting diode;

wherein the fourth light emitting diode is connected to the fourth circuit and the fourth circuit can vary the intensity of light emitted by the fourth light emitting diode;

wherein the fifth light emitting diode is connected to the fifth circuit and the fifth circuit can vary the intensity of light emitted by the fifth light emitting diode;

wherein the sixth light emitting diode is connected to the sixth circuit and the sixth circuit can vary the intensity of light emitted by the sixth light emitting diode;

wherein each of the light intensities of the first, second, third, fourth, fifth and six light emitting diodes can be varied independently of each of the other light intensities of the first, second, third, fourth, fifth, and sixth light emitting diodes;

and wherein the first, second, third, fourth, fifth and sixth light emitting diodes all emit light of a first color; and

wherein the communications component can receive a control command for varying each of the light intensities of each of the first, second, third, fourth, fifth and sixth light emitting diodes.

51. (amended) The lighting apparatus of claim 50 further comprising  
a seventh light emitting diode which emits light having an intensity;  
wherein the substrate has a seventh circuit;  
wherein the seventh light emitting diode is connected to the seventh circuit;  
wherein the seventh circuit can vary the intensity of light emitted by the seventh light  
emitting diode;  
and wherein the seventh light emitting diode emits light of a second color different than  
the first color.
52. The lighting apparatus of claim 50 wherein the first color is white.
53. The lighting apparatus of claim 51 wherein the second color is amber.
54. The lighting apparatus of claim 51 wherein the second color is yellow
55. The lighting apparatus of claim 51 wherein the second color is red.
56. (twice amended) The lighting apparatus of claim 51 wherein the intensity of the first color is  
varied to change the color temperature of the light projected onto the projection surface by the  
lighting apparatus.
57. (twice amended) The lighting apparatus of claim 51 wherein the intensity of the second  
color is varied to change the color temperature of the light projected onto the projection surface  
by the lighting apparatus.

58. (amended) The lighting apparatus of claim 50 wherein an electrical component is located within the base housing.

59. The lighting apparatus of claim 58 wherein the electrical component is a battery.

60. (twice amended) The lighting apparatus of claim 58 wherein the lamp housing can pan and tilt in relation to the base housing by a motor.

61. (amended) The lighting apparatus of claim 60 wherein the rotation of the lamp ~~first~~ housing relative to the base housing is caused by remote control.

62. (twice amended) The lighting apparatus of claim 61 wherein a communications line is connected to the base housing.

63. (amended) The lighting apparatus of claim 50 further comprising ventilation holes and the ventilation holes are located in the substrate in proximity to any of the first, second, third, fourth, fifth, or sixth light emitting diodes.

64. The lighting apparatus of claim 63 further comprising a fan; and wherein the fan forces air through the ventilation holes.

65. (amended) A lighting apparatus for projecting light onto a surface comprising:

a substrate;

first, second, third, fourth, fifth and sixth light emitting diodes, each of which is fixed to the substrate;

a first housing in which the substrate is located;

a communications component;

wherein each of the first, second, third, fourth, fifth and sixth light emitting diodes emit light having an intensity;

wherein the substrate has first, second, third, fourth, fifth and sixth circuits;

wherein the first light emitting diode is connected to the first circuit and the first circuit can vary the intensity of light emitted by the first light emitting diode;

wherein the second light emitting diode is connected to the second circuit and the second circuit can vary the intensity of light emitted by the second light emitting diode;

wherein the third light emitting diode is connected to the third circuit and the third circuit can vary the intensity of light emitted by the third light emitting diode;

wherein the fourth light emitting diode is connected to the fourth circuit and the fourth circuit can vary the intensity of light emitted by the fourth light emitting diode;

wherein the fifth light emitting diode is connected to the fifth circuit and the fifth circuit can vary the intensity of light emitted by the fifth light emitting diode;

wherein the sixth light emitting diode is connected to the sixth circuit and the sixth circuit can vary the intensity of light emitted by the sixth light emitting diode;

wherein each of the light intensities of the first, second, third, fourth, fifth and sixth light emitting diodes can be varied independently of each of the other light intensities of the first, second, third, fourth, fifth, and sixth light emitting diodes;

and wherein the first, second, third, fourth, fifth and sixth light emitting diodes all emit light of a first color; and

wherein the communications component can receive a control command for varying each of the light intensities of each of the first, second, third, fourth, fifth and sixth light emitting diodes; and

further comprising a variable filter.

66. The lighting apparatus of claim 65 wherein the variable filter is a liquid crystal emulsion filter.

67. (amended) The lighting apparatus of claim 65 wherein any of the first, second, third, fourth, fifth or sixth light emitting diodes emit light in a direction passing through the filter.

68. The lighting apparatus of claim 65 further including a communications line and wherein the variable filter can be varied by communications received over the communications line.

69. The lighting apparatus of claim 50 wherein the substrate is a flexible substrate.

70. The lighting apparatus of claim 50 wherein the substrate is a curved substrate

71. The lighting apparatus of claim 50 wherein the first color is ultraviolet.

72. The lighting apparatus of claim 51 wherein the second color is ultraviolet.

73. (twice amended) A lighting device for projecting light onto a surface comprising:  
a lamp housing;  
the lamp housing comprising a substrate and a plurality of light emitting diodes;  
wherein the substrate has a first circuit and a second circuit;  
wherein a first portion of the plurality of light emitting diodes are connected to the first circuit and the first circuit can vary the intensity of light emitted by the first portion of the plurality of light emitting diodes;

wherein a second portion of the plurality of light emitting diodes are connected to the second circuit and the second circuit can vary the intensity of light emitted by the second portion of the plurality of light emitting diodes;

wherein the first portion of the plurality of light emitting diodes emits light of a first color and the second portion of the plurality of light emitting diodes emits light of a second color different from the first color;

wherein the plurality of light emitting diodes have respective directions of light energy emission;

a base housing;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of the projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value; and

a power applying component disposed in the base housing;

wherein the power applying component is electrically coupled to the light emitting diodes for applying power to the light emitting diodes; and

wherein the lamp housing is rotationally mounted to the ~~second~~ base housing for revolving the lamp housing relative to the base housing to vary the direction of light energy emission relative to the base housing.

74. (amended) A lighting device for projecting light onto a surface comprising:

a first housing;

the first housing comprising a substrate and a plurality of light emitting diodes;  
wherein the substrate has a first circuit and a second circuit;  
wherein a first portion of the plurality of light emitting diodes are connected to the first circuit and the first circuit can vary the intensity of light emitted by the first portion of the plurality of light emitting diodes;  
wherein a second portion of the plurality of light emitting diodes are connected to the second circuit and the second circuit can vary the intensity of light emitted by the second portion of the plurality of light emitting diodes;  
wherein the first portion of the plurality of light emitting diodes emits light of a first color and the second portion of the plurality of light emitting diodes emits light of a second color different from the first color;  
wherein the plurality of light emitting diodes have respective directions of light energy emission;  
a second housing; and  
a power applying component disposed in the second housing;  
wherein the power applying component is electrically coupled to the light emitting diodes for applying power to the light emitting diodes; and  
wherein the first housing is rotationally mounted to the second housing for revolving the first housing relative to the second housing to vary the direction of light energy emission relative to the second housing;  
and the substrate comprising a flexible substrate, wherein:  
the first housing comprises a threaded holder;  
the light emitting diodes are mounted on the flexible substrate;  
the flexible substrate is mounted in the threaded holder;  
the second housing comprises a threaded case;  
the power applying component comprises a battery; and

the threaded holder engages the threaded case and is manually rotatable relative to the case for varying the basic directions of light energy emission relative to the case by deformation of the flexible substrate.

75. (amended) The lighting device of claim 73 further comprising

a flexible substrate and an actuator coupled to the flexible substrate, wherein:  
the light emitting diodes are mounted on the flexible substrate;  
the flexible substrate is mounted in the lamp housing;  
the base housing comprises an electronics housing;  
the power applying component comprises an internal power supply; and  
the actuator is controllable for varying the basic directions of light energy emission relative to the electronics housing by deformation of the flexible substrate.

76. (twice amended) The lighting device of claim 73 further comprising

a yoke, wherein the yoke is mounted for rotation to the lamp housing;  
wherein the yoke is mounted for rotation to the base housing;  
wherein the lamp housing is rotated in relation to the base housing by a motor;  
wherein the base housing comprises an electronics housing; and  
the power applying component comprises an internal power supply.

77. (amended) The lighting device of claim 76 further comprising a communications line and  
the communications line is connected to the base housing.

78. (twice amended) An apparatus comprising:

a lamp housing;



a substrate disposed in the housing, the substrate having a plurality of individually controllable circuits; and

first, second, third, fourth, and fifth light emitting diodes of a plurality of light emitting diodes respectively fixed to the circuits of the substrate for directing light from the lamp housing;

a base housing;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of the projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value;

wherein the first, second, third, fourth, and fifth light emitting diodes have respectively independently variable light intensities;

wherein the first, second, third, fourth, and fifth light emitting diodes emit light of first, second, third, fourth, and fifth wavelengths, respectively; and

wherein the first, second, third, fourth, and fifth wavelengths produce respectively different colors.

79. (amended) A lighting apparatus for projecting light onto a surface comprising:

a substrate;

a lamp housing in which the substrate is located;

a base housing;

a yoke;

a first, a second and a third light emitting diode of a plurality of light emitting diodes, each of which is fixed to the substrate;

means for remote positioning of the lamp housing with respect to the base housing so that an actual azimuth of the lamp housing with respect to the base housing is set to a predetermined azimuth value and an actual elevation of the lamp housing with respect to the base housing is set to a predetermined elevation value, and so that light from the plurality of light emitting diodes is projected onto a predetermined location of the projection surface as determined by the actual azimuth and the actual elevation, and in response to one or more control signals which specify the predetermined azimuth value and the predetermined elevation value;

a communications component;

wherein each of the first, second and third light emitting diodes emits light having an intensity;

wherein the substrate has first, second, and third circuits;

wherein the first light emitting diode is connected to the first circuit and the first circuit can vary the intensity of light emitted by the first light emitting diode;

wherein the second light emitting diode is connected to the second circuit and the second circuit can vary the intensity of light emitted by the second light emitting diode;

wherein the third light emitting diode is connected to the third circuit and the third circuit can vary the intensity of light emitted by the third light emitting diode;

wherein each of the light intensities of the first, second and third light emitting diodes can be varied independently of each of the other light intensities of the first, second, and third light emitting diodes;

wherein the first light emitting diode emits light of a first color;

wherein the second light emitting diode all emits light of a second color;

wherein the third light emitting diode emits light of a third color;

wherein the communications component can receive a control command for varying either any of the light intensities of the first, second, and third light emitting diodes;

and wherein the lamp housing can be positioned in relation to the base housing by remote control.

80. The lighting apparatus of claim 79 wherein the first color is green, the second color is red and the third color is blue.

81. (amended) The lighting apparatus of claim 79 wherein the remote control of the lamp housing in relation to the base housing is obtained by a motor.

82. The lighting apparatus of claim 79 wherein at least one of the first, second or third colors is a white color.